

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/008909

International filing date (day/month/year)
09.08.2004

Priority date (day/month/year)
27.08.2003

International Patent Classification (IPC) or both national classification and IPC
H01L51/20, H01L27/15

Applicant
OSRAM OPTO SEMICONDUCTORS GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 65.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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IAF9 Rec'd PCT/PTO 27 FEB 2006
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. II Priority

 1. ☐ The following document has not been furnished:

☐ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

 2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

 3. ☒ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-4,6-11,14-25
Inventive step (IS)	Yes: Claims	5,12,13
	No: Claims	1-25
Industrial applicability (IA)	Yes: Claims	1-25
	No: Claims	

2. Citations and explanations

see separate sheet

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

D1a: PATENT ABSTRACTS OF JAPAN vol. 2000, no. 26, 1 July 2002

D1b: JP 2001 244073 A (FUJI ELECTRIC CO LTD), 7 September 2001

D2a: PATENT ABSTRACTS OF JAPAN vol. 1996, no. 12, 26 December 1996

D2b: JP 08 222371 A (IDEMITSU KOSAN CO LTD), 30 August 1996

1.

The application does not meet the requirements of Article 6 PCT, because claim 22 is not clear.

The subject-matter of product claim 22 is drafted as dependent on method claim 13. However as a product claim can not be dependent on a method claim, it appears that an error has been made. Product claim 22 should rather be dependent on independent product claim 16 and would be interpreted as such in the following reasoning.

2.

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-4, 6-11, 14-25 is not new in the sense of Article 33(2) PCT.

2.1

The document D1b discloses (the references in parentheses applying to this document):

A method for manufacturing an organic electroluminescent display device (abstract D1a), the method comprising the step of:

providing a light-permeable substrate (figures 1 and 5, 1);

arranging at least one transparent electrode on the light-permeable substrate, the transparent electrode being made of a light-permeable conductive film (figures 1 and 5, 2);

forming at least one organic layer on the subassembly, the at least one organic layer being made of an organic electroluminescent medium so that the at least one organic layer covers the electrode (figures 1 and 5, 4);

forming a conductive film all over the at least one organic layer (figure 1 and 5, 5); and

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removing at least one portion of the conductive film so as to create electrodes being electrical isolated to each other using a radiation method (figure 5 d, paragraphs 21-24).

All features of independent claim 1 are disclosed in D1b, therefore the subject-matter of this claim is not new in the sense of Article 33(2) PCT.

Moreover the additional features of claims 2-4 (see figures 1 and 5), 6-11 (see figures 1, 5, paragraphs 21-24) and 14 are disclosed in D1b (figure 5). Consequently the subject-matter of these claims is also not new.

2.2

D1b also discloses:

An organic electroluminescent display comprising:

- a light-permeable substrate (figure 1, 1);
- at least one transparent electrode arranged in the light-permeable substrate and formed of a light-permeable conductive film (figure 1, 2, paragraph 21);
- a plurality of insulating members comprising a valley and consisting at least partially of an insulating material and arranged on the transparent electrodes (figure 1, 3);
- at least one organic layer each formed of an organic electroluminescent medium and arranged at least between each adjacent two of the insulating members (figure 1, 4); and
- upper electrodes each made of a conductive film deposited all over the at least one organic layer (figure 1, 5').

All features of independent claim 16 are disclosed in D1b, therefore the subject-matter of this claim is not new (Article 33(2) PCT).

Moreover D1b also describes the additional features of claims 17-25 (see figure 1, 5, paragraphs 21-25), consequently the subject-matter of these claims is also not new.

3.

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 5, 12 and 13 does not involve an inventive step in the sense of Article 33(3) PCT.

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3.1

The subject-matter of claim 5 differs from D1b in that electron beam, instead of laser beam, is used as radiation method to pattern the conductive film. However this feature refers to a known alternative radiation method to pattern metal layer (see for instance D2b, paragraph 19). Therefore no inventive merit can be attributed to the subject-matter of claim 5.

3.2

The subject-matter of claim 12 differs from D1b in that the ribs made of photoresist are subjected to heat of approximately 220°C. However this temperature refers to a common temperature used in photolithography method to bake the photoresist. Therefore it appears that the subject-matter of this claim also lacks an inventive step.

3.3

The additional feature of dependent claim 13 relates to a minor implementation detail that is obvious and just normal design, and which does not add anything of inventive significance to the subject-matter of claim 8.